Remarks

The Final Office Action mailed April 20, 2007 has been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 1-17, 21-24, 26, and 32-48 are now pending in this application. Claims 1-5, 7-9, 16, 17, 37, and 40 stand rejected. Claims 6, 10-15, 21-24, 26, 32-36, 38, 39, and 41-48 have been canceled.

The rejection of Claims 1, 7, 9, 37, and 40 under 35 U.S.C. §112 for introducing new matter is respectfully traversed. Claims 1, 7, 9, 37, and 40 have been amended to delete the new matter. Accordingly, the rejection is moot and Applicants respectfully request that the Section 112 rejection be withdrawn.

The objection to Claims 1, 7, 9, 37, and 40 is respectfully traversed. Claims 1, 7, 9, 37, and 40 have been amended to address the issues raised in the Office Action. Accordingly, Applicants respectfully request that the objection to Claims 1, 7, 9, 37, and 40 be withdrawn.

The objection to Claim 9 is respectfully traversed. Claim 9 has been amended to address the issues raised in the Office Action. Accordingly, Applicants respectfully request that the objection to Claim 9 be withdrawn.

The objection to Claim 40 is respectfully traversed. Claim 40 has been amended to address the issues raised in the Office Action. Accordingly, Applicants respectfully request that the objection to Claim 40 be withdrawn.

The rejection of Claims 1-5 and 16-17 and 40 under 35 U.S.C. § 112, second paragraph, is respectfully traversed. Applicants have amended the independent claims to include the recitation "supply at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules that regulate energy storage." Applicants submit that this recitation clearly distinguishes phospholipase A2γ from other members of the phospholipase A2 family.

Accordingly, Applicants respectfully request that the Section 112 rejection of Claims 1-5 and 16-17 and 40 be withdrawn.

The rejection of Claims 7 and 8 under 35 U.S.C. § 112, second paragraph, is respectfully traversed. Claims 7 and 8 have been amended to address the issues raised by the Examiner in the Office Action. Accordingly, Applicants respectfully request that the Section 112 rejection of Claims 7 and 8 be withdrawn.

The rejection of Claim 16 under 35 U.S.C. § 112, second paragraph, is respectfully traversed. Claim 16 has been amended to address the issues raised by the Examiner in the Office Action. Accordingly, Applicants respectfully request that the Section 112 rejection of Claim 16 be withdrawn.

The first rejection of Claim 37 under 35 U.S.C. § 112, second paragraph, is respectfully traversed. Claim 37 has been amended to address the issues raised by the Examiner in the Office Action. Accordingly, Applicants respectfully request that the Section 112 rejection of Claim 37 be withdrawn.

The first rejection of Claim 40 under 35 U.S.C. § 112, second paragraph, is respectfully traversed. Claim 40 has been amended to address the issues raised by the Examiner in the Office Action. Accordingly, Applicants respectfully request that the Section 112 rejection of Claim 40 be withdrawn.

The rejection of Claim 9 under 35 U.S.C. § 112, second paragraph, as being indefinite is respectfully traversed. Claim 9 has been amended to remove the new matter. Accordingly, Applicants respectfully request that the Section 112 rejection of Claim 9 be withdrawn.

The second rejection of Claim 37 under 35 U.S.C. § 112, second paragraph, is respectfully traversed. Claim 37 has been amended to address the issues raised by the Examiner in the Office Action. Accordingly, Applicants respectfully request that the Section 112 rejection of Claim 37 be withdrawn.

The second rejection of Claim 40 under 35 U.S.C. § 112, second paragraph, is respectfully traversed. Claim 40 has been amended to address the issues raised by the Examiner in the Office Action. Accordingly, Applicants respectfully request that the Section 112 rejection of Claim 40 be withdrawn.

The rejection of Claims 1-5, 7-9, 16-17, 37, and 40 under 35 U.S.C. § 112, first paragraph, for failing to comply with the enablement requirement is respectfully traversed. The independent claims have been amended to delete the newly added matter directed toward a transgenic mouse. Further, the broad scope of the independent claims has been narrowed by adding the limitation "supplying at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules that regulate energy storage." Accordingly, the independent claims are submitted to comply with the enablement requirements of Section 112. For at least these reasons, Applicants respectfully request that the Section 112 rejection of Claims 1-5, 7-9, 16-17, 37, and 40 be withdrawn.

The rejection of Claims 1-2, 4-5, 7, 9, 16-17, and 40 under 35 U.S.C. § 112, first paragraph, for failing to comply with the written description requirement is respectfully traversed. The independent claims have been amended to delete the newly added matter directed toward a transgenic mouse. Accordingly, the independent claims are submitted to comply with the written description requirement of Section 112. For at least these reasons, Applicants respectfully request that the Section 112 rejection of Claims 1-2, 4-5, 7, 9, 16-17, and 40 be withdrawn.

The rejection of Claims 1-2, 4-5, and 40 under 35 U.S.C. § 102(a) as being anticipated by Bennett et al. (U.S. Patent 5,625,125) (hereinafter referred to as "Bennett") is respectfully traversed.

Bennett describes a vector that includes an isolated polynucleotide encoding a phospholipase A2 enzyme that is used to generate a transgenic mouse that expresses the enzyme.

Claim 1 recites an isolated nucleic acid molecule comprising "a polynucleotide encoding a phospholipase A2γ polypeptide that supplies at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules that regulate energy storage."

Bennett does not describe or suggest an isolated nucleic acid molecule as recited in Claim 1. More specifically, Bennett does not describe or suggest an isolated nucleic acid molecule that supplies at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage. Rather, Bennett generically describes a phospholipase A2 enzyme that exists within a broad family. Applicants submit that a description of a phospholipase A2 enzyme is not a description of a specific phospholipase A2γ polypeptide that supplies at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules that regulate energy storage. Accordingly, Claim 1 is submitted to be patentable over Bennett.

Claims 2, 4, and 5 depend from independent Claim 1. When the recitations of Claims 2, 4, and 5 are considered in combination with the recitations of Claim 1, Applicants submit that Claims 2, 4, and 5 are likewise patentable over Bennett.

Claim 40 recites "an in vitro expression construct in which an $iPLA_2$ sequence is cloned downstream from an SV40 promoter, wherein the in vitro expression construct is configured to supply at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage."

Bennett does not describe or suggest an in vitro expression construct as recited in Claim 40. More specifically, Bennett does not describe or suggest an in vitro expression construct that supplies at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage. Rather, Bennett generically describes a phospholipase A2 enzyme that exists within a broad family. Applicants submit that a description of a phospholipase A2 enzyme is not a description of a specific phospholipase A2γ polypeptide that supplies at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules that regulate energy storage. Accordingly, Claim 40 is submitted to be patentable over Bennett.

For at least the reasons set forth above, Applicants respectfully request that the Section 102 rejection of Claims 1-2, 4-5, and 40 be withdrawn.

The rejection of Claims 1-5, 7, 9, and 40 under 35 U.S.C. § 102(a) as being anticipated by Tanaka et al. (Biochem. Biophysical Res. Commun., 2000, Vol. 272: 320-326, published June 07, 2000) (hereinafter referred to as "Tanaka") is respectfully traversed.

Tanaka describes an intercellular membrane-bound calcium-independent phospholipase A2. Specifically, Tanaka describes an independent phospholipase A2 that predominately exists in a membrane fraction and exhibits a phospholipase A2 activity in a calcium-independent manner when expressed in COS-7 cells. The transcript of the membrane-bound iPLA2 gene is ubiquitously observed as a single band of approximately 3.3 kb on Northern blot, with the most abundant expression in the skeletal muscle and heart. Notably, Tanaka does not describe nor suggest an isolated nucleic molecule configured to supply at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules that regulate energy storage.

Claim 1 is recited above.

Tanaka does not describe or suggest an isolated nucleic acid molecule as recited in Claim 1. More specifically, Tanaka does not describe or suggest an isolated nucleic acid molecule that supplies at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage. Rather, Tanaka merely describes calcium-independent phospholipase A2 that exhibits phospholipase A2 activity when expressed in COS-7 cells. Accordingly, Claim 1 is submitted to be patentable over Tanaka.

Claims 2-5 depend from independent Claim 1. When the recitations of Claims 2-5 are considered in combination with the recitations of Claim 1, Applicants submit that dependent Claims 2-5 likewise are patentable over Tanaka.

Claim 7 recites an isolated nucleic acid comprising "a polynucleotide having at least about 90% sequence identity with SEQ ID NO: 6 wherein the encoded polypeptide has an enzymatic activity, and wherein the isolated nucleic acid is configured to supply at least one

of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage."

Tanaka does not describe or suggest an isolated nucleic acid as recited in Claim 7. More specifically, Tanaka does not describe or suggest an isolated nucleic acid that supplies at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage. Rather, Tanaka merely describes calcium-independent phospholipase A2 that exhibits phospholipase A2 activity when expressed in COS-7 cells. Accordingly, Claim 7 is submitted to be patentable over Tanaka.

Claim 9 recites "an antisense sequence which specifically hybridizes to SEQ ID NO: 6, wherein the antisense sequence is configured to supply at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage."

Tanaka does not describe or suggest an antisense sequence as recited in Claim 9. More specifically, Tanaka does not describe or suggest an antisense sequence that supplies at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage. Rather, Tanaka merely describes calcium-independent phospholipase A2 that exhibits phospholipase A2 activity when expressed in COS-7 cells. Accordingly, Claim 9 is submitted to be patentable over Tanaka.

Claim 40 is recited above.

Tanaka does not describe or suggest an in vitro expression construct as recited in Claim 40. More specifically, Tanaka does not describe or suggest an in vitro expression construct that supplies at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage. Rather, Tanaka merely describes calcium-independent phospholipase A2 that exhibits phospholipase A2 activity when expressed in COS-7 cells. Accordingly, Claim 40 is submitted to be patentable over Tanaka.

For the reasons set forth above, Applicants respectfully request that the Section 102 rejection of Claims 1-5, 7, 9, and 40 be withdrawn.

The rejection of Claims 1-5, 7, 9, and 40 under 35 U.S.C. § 102(a) as being anticipated by Mancuso et al. (BJC., 2000, Vol. 275 (14): 9937-9945, published April 07, 2000) (hereinafter referred to as "Mancuso") is respectfully traversed.

Mancuso describes the identification of a complete organization of a putative phospholipase A2 through analysis of previously published expressed sequence tags, PCR of human heart cDNA, and 5'-rapid amplification of cDNA ends. A polymerase chain reaction and Northern blotting demonstrated a 3.4-kilobase message, which encoded a polypeptide with a maximum calculated molecular weight of 88476.9. The 3.4 kilobase message was present in multiple human parenchymal tissues including the heart, skeletal muscle, placenta, brain, liver, and pancreas. Notably, Mancuso does not describe nor suggest an isolated nucleic molecule configured to supply at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules that regulate energy storage.

Claim 1 is recited above.

Mancuso does not describe or suggest an isolated nucleic acid molecule as recited in Claim 1. More specifically, Mancuso does not describe or suggest an isolated nucleic acid molecule that supplies at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage. Rather, Mancuso describes identification of a complete organization of a putative phospholipase A2, wherein the phospholipase A2 demonstrates a 3.4-kilobase message. Accordingly, Claim 1 is submitted to be patentable over Mancuso.

Accordingly, for at least the reasons set forth above, Claim 1 is submitted to be patentable over Mancuso.

Claims 2-5 depend from independent Claim 1. When the recitations of Claims 2-5 are considered in combination with the recitations of Claim 1, Applicants submit that dependent Claims 2-5 likewise are patentable over Mancuso.

Claim 7 is recited above.

Mancuso does not describe nor suggest an isolated nucleic acid as recited in Claim 7. More specifically, Mancuso does not describe nor suggest an isolated nucleic acid configured to supply at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage. Rather, Mancuso describes identification of a complete organization of a putative phospholipase A2, wherein the phospholipase A2 demonstrates a 3.4-kilobase message. Accordingly, for at least the reasons set forth above, Claim 7 is submitted to be patentable over Mancuso.

Claim 9 is recited above.

Mancuso does not describe nor suggest an antisense sequence as recited in Claim 9. More specifically, Mancuso does not describe nor suggest an antisense sequence configured to supply at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage. Rather, Mancuso describes identification of a complete organization of a putative phospholipase A2, wherein the phospholipase A2 demonstrates a 3.4-kilobase message. Accordingly, for at least the reasons set forth above, Claim 9 is submitted to be patentable over Mancuso.

Claim 40 is recited above.

Mancuso does not describe nor suggest an in vitro expression construct as recited in Claim 40. More specifically, Mancuso does not describe nor suggest an in vitro expression construct configured to supply at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage. Rather, Mancuso describes identification of a complete organization of a putative phospholipase A2, wherein the phospholipase A2 demonstrates a 3.4-kilobase message. Accordingly, for at least the reasons set forth above, Claim 40 is submitted to be patentable over Mancuso.

For the reasons set forth above, Applicants respectfully request that the Section 102 rejection of Claims 1-5, 7, 9, and 40 be withdrawn.

The rejection of Claim 9 under 35 U.S.C. § 102(e) as being anticipated by Tang et al. (U.S. Patent 6,569,662) (hereinafter referred to as "Tang") is respectfully traversed.

Tang describes polynucleotides and proteins encoded by such polynucleotide. Specifically, the polynucleotides are isolated DNA sequences based on a secretory leader sequences. More specifically, the polynucleotides are assembled from expressed sequence tags that are isolated by sequencing by hybridization. Notably, Tang does not describe nor suggest an isolated nucleic molecule configured to supply at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules that regulate energy storage.

Claim 9 is recited above.

Tang does not describe nor suggest an antisense sequence as recited in Claim 9. More specifically, Tang does not describe nor suggest an antisense sequence configured to supply at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage. Rather, Tang merely describes polynucleotides that are sequenced by hybridization. Accordingly, for at least the reasons set forth above, Claim 9 is submitted to be patentable over Tang.

For the reasons set forth above, Applicants respectfully request that the Section 102 rejection of Claim 9 be withdrawn.

The rejection of Claim 9 under 35 U.S.C. § 102(e) as being anticipated by Yue et al. (U.S. Patent Application Publication 2004/0248243) (hereinafter referred to as "Yue") is respectfully traversed.

Yue describes human lipid metabolism enzymes (LME) and polynucleotides that identify and encode LME. Yue also describes expression vectors, host cells, antibodies, agonists, and antagonists that include the human lipid metabolism enzymes. Further, Yue describes methods for diagnosing, treating, and preventing disorders associated with the aberrant expression of LME. Notably, Yue does not describe nor suggest an isolated nucleic molecule configured to supply at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules that regulate energy storage.

Claim 9 is recited above.

Yue does not describe nor suggest an antisense sequence as recited in Claim 9. More specifically, Yue does not describe nor suggest an antisense sequence configured to supply at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage. Rather, Yue describes human lipid metabolism enzymes (LME) and polynucleotides that identify and encode LME. Accordingly, for at least the reasons set forth above, Claim 9 is submitted to be patentable over Yue.

For the reasons set forth above, Applicants respectfully request that the Section 102 rejection of Claim 9 be withdrawn.

The rejection of Claims 1-5, 7, 8, and 40 under 35 U.S.C. § 103(a) as being unpatentable over Bennett in view of Tanaka or Mancuso is respectfully traversed.

Bennett, Tanaka, and Mancuso are described above.

Claim 1 is recited above.

None of Bennett, Tanaka, or Mancuso, considered alone or in combination, describes or suggests an isolated nucleic acid molecule as recited in Claim 1. More specifically, none of Bennett, Tanaka, or Mancuso, considered alone or in combination, describes or suggests an isolated nucleic acid molecule that supplies at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage. Rather, Bennett generically describes a phospholipase A2 enzyme that exists within a broad family; Tanaka merely describes calcium-independent phospholipase A2 that exhibits phospholipase A2 activity when expressed in COS-7 cells; and Mancuso describes identification of a complete organization of a putative phospholipase A2, wherein the phospholipase A2 demonstrates a 3.4-kilobase message. Accordingly, Claim 1 is submitted to be patentable over Bennett in view of Tanaka or Mancuso.

Claims 2-5 depend from independent Claim 1. When the recitations of Claims 2-5 are considered in combination with the recitations of Claim 1, Applicants submit that Claims 2-5 likewise are patentable over Bennett in view of Tanaka or Mancuso.

Claim 7 is recited above.

None of Bennett, Tanaka, or Mancuso, considered alone or in combination, describes or suggests an isolated nucleic acid as recited in Claim 7. More specifically, none of Bennett, Tanaka, or Mancuso, considered alone or in combination, describes or suggests an isolated nucleic acid that supplies at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage. Rather, Bennett generically describes a phospholipase A2 enzyme that exists within a broad family; Tanaka merely describes calcium-independent phospholipase A2 that exhibits phospholipase A2 activity when expressed in COS-7 cells; and Mancuso describes identification of a complete organization of a putative phospholipase A2, wherein the phospholipase A2 demonstrates a 3.4-kilobase message. Accordingly, Claim 7 is submitted to be patentable over Bennett in view of Tanaka or Mancuso.

Claim 8 depends from independent Claim 7. When the recitations of Claim 8 are considered in combination with the recitations of Claim 7, Applicants submit that Claim 8 likewise is patentable over Bennett in view of Tanaka or Mancuso.

Claim 40 is recited above

None of Bennett, Tanaka, or Mancuso, considered alone or in combination, describes or suggests an in vitro expression construct as recited in Claim 40. More specifically, none of Bennett, Tanaka, or Mancuso, considered alone or in combination, describes or suggests an in vitro expression construct that supplies at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage. Rather, Bennett generically describes a phospholipase A2 enzyme that exists within a broad family; Tanaka merely describes calcium-independent phospholipase A2 that exhibits phospholipase A2 activity when expressed in COS-7 cells; and Mancuso describes identification of a complete organization of a putative phospholipase A2, wherein the phospholipase A2 demonstrates a 3.4-kilobase message. Accordingly, Claim 40 is submitted to be patentable over Bennett in view of Tanaka or Mancuso.

For at least the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claims 1-5, 7, 8, and 40 be withdrawn.

The rejection of Claims 1-5, 7-8, 16-17, 37, and 40 under 35 U.S.C. § 103(a) as being unpatentable over Bennett and Tanaka or Mancuso and further in view of McTiernan et al. (U.S. Patent No. 5,917,123) (hereinafter referred to as "McTiernan") is respectfully traversed.

Bennett, Tanaka and Mancuso are described hereinabove.

McTiernan describes transgenic nonhuman mammals that exhibit elevated levels of tumor necrosis factor alpha (TNFα) in myocardium relative to nontransgenic control mammals. McTiernan also describes a method for making transgenic TNFα non-human mammals for use in studying the treatment and prevention of cardiac dysfunction. Notably, McTiernan does not describe nor suggest an isolated nucleic molecule configured to generate transgenically generated phospholipase A2 (TGiPLA$_2$) mice. Rather, McTiernan describes a method of generating TNFα mammals.

Claim 1 is recited above.

None of Bennett, Tanaka, Mancuso, or McTiernan, considered alone or in combination, describe or suggest an isolated nucleic acid molecule as recited in Claim 1. More specifically, none of Bennett, Tanaka, Mancuso, or McTiernan, considered alone or in combination, describe nor suggest an isolated nucleic acid molecule that supplies at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage. Rather, Bennett generically describes a phospholipase A2 enzyme that exists within a broad family; Tanaka merely describes calcium-independent phospholipase A2 that exhibits phospholipase A2 activity when expressed in COS-7 cells; Mancuso describes identification of a complete organization of a putative phospholipase A2, wherein the phospholipase A2 demonstrates a 3.4-kilobase message; and McTiernan describes a method of generating TNFα mammals. Accordingly, for at least the reasons set forth above, Claim 1 is submitted to be patentable over Bennett and Tanaka or Mancuso in view of McTiernan.

Claims 2-5, 16, and 17 depend from independent Claim 1. When the recitations of Claims 2-5, 16, and 17 are considered in combination with the recitations of Claim 1, Applicants submit that dependent Claims 2-5, 16, and 17 likewise are patentable over Bennett and Tanaka or Mancuso in view of McTiernan.

Claim 7 is recited above.

None of Bennett, Tanaka, Mancuso, or McTiernan, considered alone or in combination, describe or suggest an isolated nucleic acid as recited in Claim 7. More specifically, none of Bennett, Tanaka, Mancuso, or McTiernan, considered alone or in combination, describe nor suggest an isolated nucleic acid that supplies at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage. Rather, Bennett generically describes a phospholipase A2 enzyme that exists within a broad family; Tanaka merely describes calcium-independent phospholipase A2 that exhibits phospholipase A2 activity when expressed in COS-7 cells; Mancuso describes identification of a complete organization of a putative phospholipase A2, wherein the phospholipase A2 demonstrates a 3.4-kilobase message; and McTiernan describes a method of generating TNFα mammals. Accordingly, for at least the reasons set forth above, Claim 7 is submitted to be patentable over Bennett and Tanaka or Mancuso in view of McTiernan.

Claim 9 is recited above.

None of Bennett, Tanaka, Mancuso, or McTiernan, considered alone or in combination, describe or suggest an antisense sequence as recited in Claim 9. More specifically, none of Bennett, Tanaka, Mancuso, or McTiernan, considered alone or in combination, describe nor suggest an antisense sequence that supplies at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage. Rather, Bennett generically describes a phospholipase A2 enzyme that exists within a broad family; Tanaka merely describes calcium-independent phospholipase A2 that exhibits phospholipase A2 activity when expressed in COS-7 cells; Mancuso describes identification of a complete organization of a putative phospholipase A2, wherein the phospholipase A2 demonstrates a 3.4-kilobase message; and McTiernan describes a method of generating TNFα

mammals. Accordingly, for at least the reasons set forth above, Claim 9 is submitted to be patentable over Bennett and Tanaka or Mancuso in view of McTiernan.

Claim 37 recites "a transgenic construct containing a promoter upstream of a full-length phospholipase A2 (iPLA$_2$) coding sequence SEQ ID NO: 6 for myocardial specific expression of recombinant iPLA$_2$ mice to supply at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage."

None of Bennett, Tanaka, Mancuso, or McTiernan, considered alone or in combination, describe or suggest a transgenic construct as recited in Claim 37. More specifically, none of Bennett, Tanaka, Mancuso, or McTiernan, considered alone or in combination, describe nor suggest a transgenic construct that supplies at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage. Rather, Bennett generically describes a phospholipase A2 enzyme that exists within a broad family; Tanaka merely describes calcium-independent phospholipase A2 that exhibits phospholipase A2 activity when expressed in COS-7 cells; Mancuso describes identification of a complete organization of a putative phospholipase A2, wherein the phospholipase A2 demonstrates a 3.4-kilobase message; and McTiernan describes a method of generating TNFα mammals. Accordingly, for at least the reasons set forth above, Claim 37 is submitted to be patentable over Bennett and Tanaka or Mancuso in view of McTiernan.

Claim 40 is recited above.

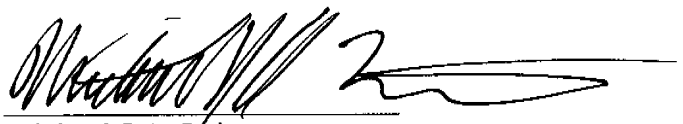
None of Bennett, Tanaka, Mancuso, or McTiernan, considered alone or in combination, describe or suggest an in vitro expression construct as recited in Claim 40. More specifically, none of Bennett, Tanaka, Mancuso, or McTiernan, considered alone or in combination, describe nor suggest an in vitro expression construct that supplies at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage. Rather, Bennett generically describes a phospholipase A2 enzyme that exists within a broad family; Tanaka merely describes calcium-independent phospholipase A2 that exhibits phospholipase A2 activity when expressed in COS-7 cells; Mancuso describes identification of a complete organization of a putative phospholipase A2, wherein the phospholipase A2

demonstrates a 3.4-kilobase message; and McTiernan describes a method of generating TNFα mammals. Accordingly, for at least the reasons set forth above, Claim 40 is submitted to be patentable over Bennett and Tanaka or Mancuso in view of McTiernan.

For the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claims 1-5, 7-9, 16, 17, 37, and 40 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



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